ICT INFRASTRUCTURE IN THE FIRST GRADE COLLEGES AFFILIATED TO KUVEMPU UNIVERSITY: A STUDY WITH SPECIAL REFERENCE TO LIBRARY AND INFORMATION SERVICES

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Research Guide

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1. INTRODUCTION

Education plays a key role for the development of any society. College level education is one among the different levels in the education system in imparting the value based education in different disciplines. Colleges are the most important institutions of society for the creation, preservation and dissemination of knowledge as well as the custodians of intellectual and ethical traditions and values in society. Colleges serve teaching, learning and research needs of education in the country. They primarily serve undergraduate students, and teaching community. In these days in view of reaching the higher education to all, quite a good number of undergraduate colleges have started post-graduate level education also and a few of them are also recognized as research centres. The standard of teaching, learning and research at a college largely depends upon the quality of the service rendered by the library.

A library is an essential corollary to every college because it has come to be regarded as an important and integral part of the academic system whose primary function is not only to provide resources but also to serve users to meet their information needs.

The growth and development of Information and Communication Technology (ICT) is playing vital role in the process of advancement of society in general and in library and information science in particular(Brose, 2001). Rapid advances in ICT in the fast two decades have brought revolutionary changes in the concept, organization, functioning and management of library and information systems throughout the world. The impact of these changes is pervasive and effecting all the aspects of library operations, information resources and services, staff skills requirements and user expectations. The accelerating pace of developments in WWW has tremendously increased the ability to access, store, process, communicate and deliver information services to the library users. ICT has a huge potential for providing wide range of new opportunities and offering better solutions to achieve greater levels of efficiency, productivity and higher standards of quality services in libraries.

Automation of library services is important for efficient and effective working of the library and information centers. Library automation provides wider horizons for the proper handling, organization, retrieval and dissemination of information, thus making library services more scientific, systematic and effective (Seema Vashista, 2007).

The college libraries have wide range of opportunities and variety of challenges offered by new technologies. ICT has become an integral part of all library operations and information services in these days. As this technology provides libraries with new choices, new opportunities and new challenges. There has been a phenomenal progress in the use of ICT applications in library operations and information services in the college libraries.

The dreams of librarianship is to serve the information needs of users timely, efficiently and economically(Venkata Ramana, 2004). Libraries all over the world realised that demands and expectations of their information consumers are rapidly increasing at a rate with which any library with limited resources can hardly cope with through conventional means. Therefore, it has become imperative on the part of libraries to revise their approach, mode of operation and means of information acquisition, organization, retrieval and dissemination to users.

Human resource is paramount importance for the success of any library (Nigam and Kataria, 2008). Libraries and librarians must cope with the demands of an information society. Librarians interact with more groups and provide services for users with various characteristics. They need patience and initiative and a user-oriented approach. Librarians must have the knowledge, skills and tools in handling digital information to be efficient creators, collectors, consolidators and communicators of information. Librarians with the knowledge, skills and tools required of information professionals in an information society will be the key success factors in enabling the library to perform its role as an information support system for institution.

A competency is a core characteristic of a person which enables them to deliver superior performance in a given role or situation(Kozlowski, 1988). Competencies are a combination of skills, knowledge, and behaviours important for organizational success, personal performance and career development. Professional competencies of librarians relate to the special knowledge in the areas of information resources, information access, technology, management, and research, as well as the ability to use these areas of knowledge as a basis for providing library and information servicesMahesh and Nandeesh, 2009).

2. LITERATURE REVIEW

Large number of studies have been conducted by the researchers in different contexts on the topic chosen for the present study. Here an humble attempt is made to review few of them.

College libraries are facing major constraints in reaching high level usage of ICT for automation of library services. Sampath Kumar and Biradar (2010) reported the findings of the survey in use of ICT in college libraries in Karnataka,India. It was found that college libraries not reached the very level in using ICT for automation due to lack budget, lack of manpower, lack of skilled staff and lack of training. They also pointed out the badly need of extensive and appropriate training to library professionals to make use of ICT tools and techniques. This paper also suggests to change the mindset of librarians in their attitudes to use ICT applications in various activities of the library and information centres.

According to Arup Kumar and Amit Kumar (2010), in their study "application of ICT and realted manpower problems in the college libraries in Burdwan", pointed out college libraries of Burdwan Sadar face several hindrances in full-fledged IT application. The primary factor was inadequate funds, insufficient manpower, lack of ICT skill among the library professionals and lack of right attitude of the authorites.

Sadanand and Shamin Periera(2008) also pointed out in their survey "A survey of library automation in college libraries in Goa state, India" inadequate funds, insufficient manpower, Lack of ICT training, lack of ICT skill among the library professionals etc., are major factors in lagging behind automation of college libraries.

According to Satyanarayana (1996) the broad objectives of library automation are: to improve the efficiency of library functions, to provide the types of services which were hither to not possible to reduce the professional manpower to tasks which are routine, repetitive or clerical, and to improve the cost efficiency of library operations.

Somerville, Smith and Macklin (2008) expressed the functioning style based on the changes in the technology. ICT literacy is the ability to use digital technology, communication tools, and/or networks appropriately to solve information problems in order to function in a knowledge society

According to Murthy (1999) the information technologies that are relevant to libraries mainly include: (i) Computer Technology, (ii) Telecommunication Technologies, (iii) Reprographic Technologies, (iv) Library Technologies, and (v) Technical communication.

Ramesh Babu, Vinayagamoorthy and Gopalakrishnan (2007) pointed out the need to acquire knowledge and skills of ICT by library professionals to extend better services. Library and information professionals today need to acquire knowledge and skills in ICT as the services of more and more libraries are now centering around information technology, especially in educational institutions. This paper examines the ICT skills among librarians in engineering colleges in Tamil Nadu. The analysis of the data represents the extent and the level of ICT skills possessed by the librarians of these institutions.

Alice and Okore opined that the influence of ICT on Library and Information Services (LIS) the availability of ICT has made it possible for digital libraries to have many more kinds of information resources than the traditional library. It is possible to have scholarly materials, websites, multimedia presentation, quantitative data, working papers, etc. The provision of ICT has some effect on different services in the library.

Ramakrishnegowda (2009) concluded in his keynote address at UGC sponsored state level seminar on “challenges to academic libraries in the emerging technological environment” as, the developments in ICT’s, internet, and World Wide Web have brought change in every walk of life. The power and speed of every bit of human activity both at individual and institutional level gain tremendous power and improvement. The academic librarians move out of their ivory towers and try to understand the pulse of the users, their information needs, information seeking behavior/patterns and try to understand what are they actually trying to achieve.

Tahourie (2006) also suggested that college librarians need special knowledge and skills including techniques of using software and hardware, selection and assessment of resources, use of information systems, ability to search networks and databases, as well as problem-solving and research skills and the ability to teach users. Librarians should acquire these skills before entering the job market.

A lot of work has been published in the field of library automation. Watane, Vinchurkar and choukhande(2005) studied the "computer literacy and use of IT in college libraries of Amravati city" covering IT awareness of the library professionals and IT application in libraries. Lohar and Kumber(2005) in their study on the present situation of college libraries in Shimoga District (Karnataka) have concluded that the situation do not meet the prescribed norms. Chakraborty and Maisal(2005) found library automation and networking do not depend only on the capacity of the computer or the networking server or even the software used since they are only tools. Much depends on the quality of manpower of the libraries and the perfection of the work they do. Sen(2005) studied on automation of a college library. According to her, entire library automation programme requires judicious decision making at various stages. Such decision may be related to 'do it' or 'buy it' services, selection of hardware and software platform, application software, types of services to be rendered, etc. Banerjee(2007) studied networking of government college libraries of West Bengal.

In addition to the literature reviewed here many more studies and surveys were carried out on provision and use of ICT and its applications in library and information services and as well as the assessment of competency skills among the library professionals in handling the ICT in libraries. But no systematic work has been attempted by any researcher towards assessing the status of application of modern technologies in the first grade college libraries affiliated to Kuvempu University with the research objectives covered in this study.

3. STATEMENT OF THE PROBLEM

In the background of the observations made and in the light of the literature review some of the research questions raised for the study are:

- Is there any definite ICT strategy being followed by the colleges in general and college libraries for library services in particular with regard to provision for ICT infrastructure and its related activities?

- Do the college librarians are competent in using the ICT facility for library services? If 'yes' are they using them to the expected level? Are they comfortable with the ICT tools, techniques and their operation? What are the problems encountered by the college librarians in using the ICT? and how to make them competent to use the ICT?

- Do the college librarians are aware and competent in acquiring and using **MHRD-UGC sponsored NMEICT and N-LIST Programme in the colleges**? What are the problems encountered by the college librarians in acquiring these services? and how to make them competent to acquire and use these services?

It is important to assess the existing status of ICT infrastructure in colleges and the efforts of the college libraries in adopting ICT. Hence the problem of the study is stated as : **"ICT INFRASTRUCTURE IN THE FIRST GRADE COLLEGES AFFILIATED TO KUVEMPU UNIVERSITY : A STUDY WITH SPECIAL REFERENCE TO LIBRARY AND INFORMATION SERVICES".**

4. NEED FOR THE STUDY

The recent changes in the education policy for higher education, the Government of India has taken lot of initiation in introducing national level programmes and projects i.e., National Mission on Education through ICT (NMEICT) of National Knowledge Network (NKN) encouraging the universities and colleges through UGC-Inflibnet Centre to adopt ICT based applications along with dedicated internet connectivity to reach the knowledge to each and every corner of the country. At the same time the Central Government has invited all colleges to acquire and make use of most popular service i.e., National Library and Information Services Infrastructure for Scholarly Content (N-LIST) to get access to selected electronic journals and electronic books through UGC-Inflibnet Programme. The Libraries and the library professionals play important role in effective implementation of these programmes.

In this competitive world in the education sector there is a challenge in front of the government and private management, it is important to attract students for survival. In this

connection both government and private managements are giving more importance and encouraging with all sort of support to adopt and use of ICT applications in their college libraries to provide quality education.

Colleges are voluntarily self equipped their college libraries with ICT infrastructure to get NAAC accreditation in these days. Importantly, because of NAAC accreditation many of the colleges have already equipped with ICT infrastructure in their college libraries.

Some of the colleges have started Post-Graduate Courses along with research work in different disciplines. In this connection, the colleges are inevitable to extended the ICT based services for effective use of library resources and services.

In my pilot study I came to know that among the selected 30 colleges, some of the colleges and college libraries have good ICT infrastructure and services. The report of the pilot study is as given below:

Table: ICT Infrastructure and ICT based services in the college libraries

N-30

Sl.N	ICT Infrastructure and Services	%
01	ICT infrastructure for Office Automation	30/30 (100%)
02	ICT infrastructure for Library Automation	28/30 (93.3%)
03	Internet Service in Office	29/30 (96.6%)
04	Internet Service in Library	21/30 (70.0%)
05	Library Automated	15/30 (50.0%)
06	Software Used for library automation	15/30 (50.0%)
07	N-LIST service availed	10/30 (33.3%)
08	Qualified Librarian in the college library	29/30 (96.0%)

This proposed study aims to study the overall ICT infrastructure in the colleges and its use in library services. It also aims to study the competencies of the library professional staff of all the first grade colleges affiliated to Kuvempu University. There are 62 colleges offering under-graduate courses on different disciplines in Science, Social Science, Education and Management. Some of the colleges have started post-graduate courses in some disciplines and a few of them are also recognized as research centres.

There is an urgent need to know the strength and weaknesses of the provision of ICT infrastructure in the college libraries affiliated to Kuvempu university. It is also believed that this study would reveal the problems faced by the college libraries in the development of ICT infrastructure.

Moreover, no systematic study has been undertaken to understand the necessity of ICT and its application in college libraries of Kuvempu university on one hand and by the same time the requirement of essential skills and awareness about using ICT and its applications in libraries among the librarians and the users of the library on the other. Hence, the present study become more relevant.

5. OBJECTIVES OF THE STUDY

The main objectives of this study are:

- To assess the status of ICT infrastructure in the colleges affiliated to Kuvempu University.
- To assess the status of ICT infrastructure in the colleges libraries affiliated to Kuvempu University.
- To assess the constraints in acquiring ICT infrastructure by the affiliated college libraries
- To assess the status of library automaton in the colleges libraries affiliated to Kuvempu University.
- To assess the status of NMEICT and N-List Programme in the affiliated college libraries.
- To assess the constraints and difficulties in acquiring NMEICT and N-List Programme by the affiliated college libraries.
- To Identify the solutions to improve the ICT infrastructure in the college libraries.
- To assess the type and levels of ICT skills possessed by the library professional staff.
- To study the means and methods adopted by the library professional staff for acquiring ICT skills.

- To assess the difficulties faced by the library professionals in acquiring ICT skills.
- To Identify the solutions to improve ICT skills among the library professionals of the college libraries.
- To study the use of Internet by the users.
- To suggest and find solution to acquire and use effectively the N-LIST under NMEICT.

6. HYPOTHESES:

For the present study the following hypotheses have been formulated:

- First Grade Colleges affiliated to the Kuvempu university under the study are having adequate ICT infrastructure for their office automation.
- College Libraries equipped with adequate ICT infrastructure for their library automation.
- College libraries are automated their all library services using required tools and techniques
- Libraries of First Grade Colleges affiliated to the Kuvempu university under the study are having **NMEICT and N-LIST Programme.**
- Librarians of First Grade Colleges affiliated to the Kuvempu university under the study are well aware of **NMEICT and N-LIST Programmes.**
- Library professionals of First Grade Colleges affiliated to the Kuvempu university have undergone different ICT related training programmes.
- Library professionals of First Grade Colleges affiliated to the Kuvempu university are having lot of constraints at different levels in implementing ICT infrastructure in the college libraries.
- Library professionals of First Grade Colleges affiliated to the Kuvempu university are having lot of constraints at different levels in having ICT skills.

7. SCOPE AND LIMITATIONS OF THE STUDY

The study is confined to the following issues:

1. To study the existing ICT infrastructure used for college office automation in general and library services in the college libraries in particular.
2. To Study the competency skills among the library professionals.
3. To study the use of NMEICT and N-LIST programmes in the college libraries.

The scope of the study will be limited to the jurisdiction of the Kuvempu University in Karnataka State. The colleges offering B.Ed and B.P.Ed. courses are excluded from this study.

8. METHODOLOGY

Keeping in view the objectives of the study, an effort is made to evolve a suitable methodology for the research.

The study is designed to determine and analyze the existing status and use of ICT in the college libraries on one hand and the status and usage of NMEICT programme and N-LIST services on the other hand. The study also covers the ICT competencies among the library professioansl of affiliated college libraries. The principal tool that will be used for data collection covering the college libraries spread across two revenue districts will be through questionnaires. The data collection will be supplemented by interview technique wherever necessary. The various published as well as unpublished primary and secondary sources along with the sources available through Internet will be scanned for additional information. The observation method will also be adopted and used to supplement the data collecting through questionnaire to enhance its reliability.

9. CHAPTERISATION

The present study is organized into six chapters and they are explained as under:

As a convention, the first chapter deals with the Introduction, which includes the Statement of the Problem, Need and Scope of the Study, Objectives, Research Methodology, Limitations of the study.

The second chapter is Review of Literature and it consists of the review of the literature accessed and searched so as to undertake the present study. The articles from Journals and Conference proceedings, books and other sources will be referred and reviewed during the study.

The third chapter will be on research methodology.

The fourth chapter covers the profile of the affiliated colleges and the libraries under the study.

The fifth chapter deals the data analysis and interpretation of the ICT infrastructure, use of ICT in library services. This chapter also deals the models designed on ICT and its applications and its implementation in the library services.

The sixth chapter deals with Conclusion, which will include the summary of the findings of the study and conclusion.

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